

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 – 10 (Canceled)

11. (Previously Amended) A method for packaging integrated circuits, comprising:
providing a lead frame of a conductive material with an array of lead posts that are equally spaced apart and a connecting sheet connecting each of the lead posts;
attaching a plurality of first dice to the lead frame, wherein each first die is electrically and mechanically connected to a plurality of lead posts within the array of lead posts, and wherein a conductive side of each first die faces the lead posts;
encapsulating the plurality of dice with an encapsulating material; and
removing a thin portion of the connecting sheet between each of the lead posts to electrically isolate each of the lead posts wherein an unremoved portion of the connecting sheet remains connected to each lead post and forms an oversized contact pad on a bottom surface of the packaged integrated circuits, wherein the oversized contact pad has a diameter that is larger than a diameter of each of the lead posts.
12. (Cancelled)
13. (Original) The method, as recited in claim 12, further comprising singulating the encapsulated first dice.
14. (Previously Amended) The method, as recited in claim 13, wherein attaching the plurality of first dice to the lead frame comprises placing a conductive epoxy between conductive pads on the plurality of dice and each of the lead posts.
15. (Original) The method, as recited in claim 14, further comprising testing the integrated circuit packages as a panel before the step of singulation.
16. (Original) The method, as recited in claim 15, wherein the removing of the connecting sheet forms lead fingers.

17. (Cancelled)

18. (Previously Amended) The method, as recited in claim 17, wherein the conductive side of a die of the plurality of dice comprises a plurality of spaced apart conductive pads, wherein the conductive epoxy electrically and mechanically connects each conductive pad to one of the lead posts.

19. (currently amended) The method, as recited in claim 18, wherein the placing the conductive epoxy comprises:

placing the conductive epoxy on an upper surface of each of the lead posts; and

placing a plurality of dice so that each conductive pad is placed into contact with the conductive epoxy on ~~an~~the upper surface of a respective lead post.

20. (currently amended) The method, as recited in claim 13, further comprising:

attaching a plurality of second dice to the plurality of first dice, wherein each second die has a conductive side and a side opposite the conductive side, wherein the side opposite the conductive side of each second die is connected to a side opposite the conductive side of a respective first die, wherein each second die has a plurality of conductive pads on the conductive side of the second die; and

wirebonding conductive pads of each second die to lead posts of the array of lead posts of the lead frame, wherein encapsulating the plurality of first dice encapsulates the plurality of second dice.

21. (Previously Added) A method as recited in claim 11 wherein at least three die are connected to lead posts within the array of lead posts.

22. (Previously Added) A method as recited in claim 11 wherein the array of lead posts is at least ten by ten in size.

23. (Previously Added) A method as recited in claim 11 wherein the removing of the thin portions of the connecting sheet is performed by passing a rotating saw blade over the connecting sheet.

24. (Previously Added) A method as recited in claim 11 wherein the connecting sheet is imperforate and wherein the array of lead posts are integrally formed with the connecting sheet and extend from a top surface of the connecting sheet.

25. (Previously Added) A method for manufacturing a packaged semiconductor device comprising:

providing a conductive lead frame having an imperforate connecting sheet and an array of integrally formed lead posts that extend from a top surface of the connecting sheet;

attaching a plurality of semiconductor dice onto the lead frame wherein a first surface of each die, which has contact pads, is placed in contact with the array of lead posts;

applying liquid molding material over the dice and lead frame such that the molding material fills in voids between the lead posts and covers the dice.

26. (Previously Added) A method as recited in claim 25 further comprising:

removing a thin portion of the connecting sheet between each of the lead posts to electrically isolate each of the lead posts wherein an unremoved portion of the connecting sheet remains connected to each lead post and forms an oversized contact pad on a bottom surface of the packaged semiconductor device, wherein the oversized contact pad has a diameter that is larger than a diameter of each of the lead posts.

27. (Previously Added) A method as recited in claim 26 further comprising:

singulating each of the packaged semiconductor devices from the lead frame.

28. (Previously Added) A method as recited in claim 25 further comprising:

curing the liquid molding material so that a single flat molding material panel encapsulates multiple semiconductor dice.

29. (Previously Added) A method as recited in claim 11 wherein the encapsulating material is formed into a single flat panel that encapsulates the plurality of dice.

30. (new) A method for manufacturing a packaged semiconductor device comprising:

providing a conductive lead frame having an imperforate connecting sheet and a uniform two-dimensional array of integrally formed lead posts that extend from a top surface of the

connecting sheet, the connecting sheet being suitably sized such that a plurality of semiconductor dice can be mounted onto at least some of the posts in a two-dimensional array;

attaching a plurality of semiconductor dice onto the lead frame wherein a first surface of each die, which has contact pads, is placed in contact with the array of lead posts;

applying liquid molding material over the dice and lead frame such that the molding material fills in voids between the lead posts and covers the dice.

31. (new) A method as recited in claim 30 further comprising:

removing a thin portion of the connecting sheet between each of the lead posts to electrically isolate each of the lead posts wherein an unremoved portion of the connecting sheet remains connected to each lead post and forms an oversized contact pad on a bottom surface of the packaged semiconductor device, wherein the oversized contact pad has a diameter that is larger than a diameter of each of the lead posts.

32. (new) A method as recited in claim 30 further comprising:

curing the liquid molding material so that a single flat molding material panel encapsulates multiple semiconductor dice.